

CLAIMS

1-26 (Cancelled)

27. (Previously Presented) A method for achieving full occlusion of a vascular vessel, comprising delivering to the vessel an embolization device comprising a harvested submucosal tissue so as to cause a full occlusion and full blockage of the vascular vessel.

28. (Original) The method of claim 27, wherein the embolization devices comprises a coil.

29. (Original) The method of claim 27, wherein the submucosa is porcine submucosa.

30. (Original) The method of claim 27, wherein the embolization device comprises at least one sheet of submucosa.

31. (Withdrawn) The method of claim 27, wherein the device comprises a particulate material comprising submucosa.

32. (Previously Presented) A method for achieving full occlusion of a vascular vessel of a patient, comprising delivering to the vessel an embolization device comprising a harvested remodelable collagenous extracellular matrix biomaterial so as to cause a full occlusion and full blockage of the vascular vessel, wherein the harvested remodelable collagenous extracellular matrix biomaterial is effective to promote a healing response in an area of the vascular vessel occluded with the harvested remodelable collagenous extracellular matrix biomaterial.

33. (Previously Presented) The method of claim 32, wherein the biomaterial comprises submucosa.

34. (Previously Presented) The method of claim 32, wherein the device comprises a coil.

35. (Previously Presented) The method of claim 32, wherein the biomaterial comprises porcine submucosa.

36. (Previously Presented) The method of claim 32, wherein the device comprises at least one sheet of the remodelable collagenous extracellular matrix biomaterial.

37. (Previously Presented) The method of claim 32, wherein a pharmacologic agent is disposed on the biomaterial.

38-39. Cancelled.

40. (Previously Presented) The method of claim 32, wherein the biomaterial comprises a material selected from submucosa, pericardium, basement membrane, and amniotic membrane.

41. (Previously Presented) The method of claim 32, wherein the biomaterial also comprises a radiopaque marker.

42. (Withdrawn) The method of claim 32, wherein the biomaterial is injectable.

43. (Withdrawn) The method of claim 32, wherein the biomaterial is in comminuted form.

44. (Withdrawn) The method of claim 33, wherein the biomaterial is in comminuted form.

45. (Previously Presented) The method of claim 27, wherein the embolization device is free from any metallic component.

46. (Previously Presented) The method of claim 32, wherein the embolization device is free from any metallic component.

47. (Previously Presented) A method for occluding a blood vessel in a patient, comprising:

providing an embolization device free from any metallic component, the embolization device comprising a thrombogenic collagenous biomaterial harvested from animal tissue and

containing at least one biotropic agent selected from a proteoglycan, a growth factor, a glycoprotein, and a glycosaminoglycan;

delivering the embolization device to a blood vessel of the patient in such a manner as to fill the blood vessel, to cause formation of an embolus in the blood vessel, and to cause a full occlusion of the blood vessel; and

wherein the thrombogenic collagenous biomaterial is biodegradable and promotes a healing response in the patient so as to result in an all natural blockage of the blood vessel in the patient.

48. (Previously Presented) The method of claim 47, wherein the thrombogenic collagenous biomaterial comprises submucosa, pericardium, basement membrane, or amniotic membrane.

49. (Previously Presented) The method of claim 48, wherein the thrombogenic collagenous biomaterial comprises amniotic membrane.

50. (Previously Presented) The method of claim 48, wherein the thrombogenic collagenous biomaterial comprises submucosa.

51. (Previously Presented) A method for occluding a blood vessel in a patient, comprising:

advancing a delivery catheter into the blood vessel of the patient;

delivering an embolization device from the delivery catheter and into the blood vessel, the embolization device comprising a thrombogenic collagenous biomaterial sheet harvested from animal tissue or a thrombogenic component prepared from the thrombogenic collagenous biomaterial sheet, wherein the thrombogenic collagenous biomaterial sheet contains at least one biotropic agent selected from a proteoglycan, a growth factor, a glycoprotein, and a

glycosaminoglycan, and further wherein said delivering is conducted so as to fill the blood vessel, to promote the formation of thrombus in the blood vessel, and to cause a full occlusion of the blood vessel; and

wherein the thrombogenic collagenous biomaterial sheet or the thrombogenic component prepared therefrom is biodegradable and promotes a healing response in the patient so as to result in tissue ingrowth into an area of the blood vessel into which the embolization device is delivered.

52. (Previously Presented) The method of claim 51, wherein the embolization device is free from any metallic component.

53. (Withdrawn) The method of claim 51, wherein the embolization device comprises a metallic component.

54. (Withdrawn) The method of claim 51, wherein the embolization device comprises a thrombogenic component prepared from the thrombogenic collagenous biomaterial sheet, wherein the component is a comminuted component, a branched component, a helical component, a spherical component, a cubic component, or a cylindrical component.

55. (Previously Presented) A method for fully occluding a blood vessel or filling an aneurysm in a patient, comprising:

advancing a delivery catheter into the blood vessel or the aneurysm;

delivering an embolization device from the delivery catheter and into the blood vessel or the aneurysm, the embolization device comprising a thrombogenic collagenous biomaterial harvested from animal tissue and containing at least one biotrophic agent selected from a proteoglycan, a growth factor, a glycoprotein, and a glycosaminoglycan, and further wherein said

delivering is conducted so as to cause formation of an embolus and to fill and fully occlude flow in the blood vessel or to fill the aneurysm; and

wherein the thrombogenic collagenous biomaterial is biodegradable and promotes a healing response in the patient so as to result in tissue ingrowth into the blood vessel or the aneurysm.

56. (Previously Presented) The method of claim 55, wherein the embolization device is free from any metallic component.

57. (Previously Presented) The method of claim 55, which is for filling an aneurysm.

58. (Previously Presented) The method of claim 55, which is for fully occluding a blood vessel.

59. (Withdrawn) The method of claim 57, wherein the embolization device includes a metallic backbone to which the collagenous biomaterial is attached.

60. (Withdrawn) The method of claim 58, wherein the embolization device includes a metallic backbone to which the collagenous biomaterial is attached.

61. (Previously Presented) A method for filling an aneurysm in a patient, comprising:
advancing a delivery catheter into the aneurysm of the patient;

delivering an embolization device from the delivery catheter and into the aneurysm, the embolization device comprising a thrombogenic collagenous biomaterial harvested from animal tissue and containing at least one biotrophic agent selected from a proteoglycan, a growth factor, a glycoprotein, and a glycosaminoglycan, and further wherein said delivering is conducted so as to fill the aneurysm; and

wherein the thrombogenic collagenous biomaterial is biodegradable and promotes a healing response in the patient so as to result in tissue growth into the aneurysm.

62. (Previously Presented) The method of claim 61, wherein the embolization device is free from any metallic component.

63. (Withdrawn) The method of claim 61, wherein the embolization device includes a metallic component.

64. (Withdrawn) The method of claim 61, wherein the embolization device comprises a thrombogenic component prepared from a sheet of the thrombogenic collagenous biomaterial, wherein the component is a comminuted component, a branched component, a helical component, a spherical component, a cubic component, or a cylindrical component.

65. (Withdrawn) The method of claim 64, wherein the component is a comminuted component or a helical component.

66. (Withdrawn) The method of claim 65, wherein the thrombogenic collagenous biomaterial also comprises a radiopaque substance.

67. (Withdrawn) The method of claim 61, wherein the embolization device comprises a metallic backbone to which the thrombogenic collagenous biomaterial is attached.